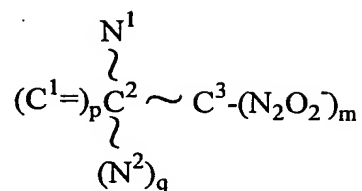


WHAT IS CLAIMED IS:

1. A compound having the chemical structural
 5 linkage as follows:



wherein

$\text{C}^2 \sim \text{C}^3$ means either $\text{C}^2 - \text{C}^3$ or $\text{C}^2 = \text{C}^3$

10 m is 1 or 2

q is 0 or 1

p is 0 or 1

provided that

15 (1) C^2 is tetravalent, and bound to two or more
 of C^1 , C^3 , N^1 and N^2 ;

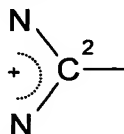
(2) when $p=1$, then $q=0$ and $\text{C}^2 \sim \text{C}^3$ means $\text{C}^2 - \text{C}^3$; or

(3) when $p=0$, and $q=1$, then $\text{C}^2 \sim \text{C}^3$ means either

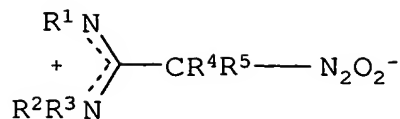
(i) $\text{C}^2 = \text{C}^3$ or (ii) $\text{C}^2 - \text{C}^3$ where $\text{C}^2 \sim \text{N}^1$ means $\text{C}^2 = \text{N}^1$;

(4) when $\text{C}^2 \sim \text{C}^3$ means $\text{C}^2 - \text{C}^3$ and $q=1$ and $p=0$;

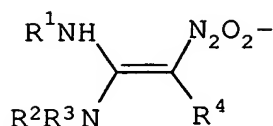
20 wherein $\text{C}^2 \sim \text{N}^1$ and $\text{C}^2 \sim \text{N}^2$ means



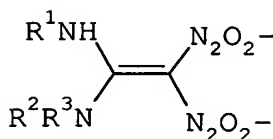
2. A compound selected from the group consisting
 of:



FORMULA I,



FORMULA II, and



FORMULA III,

wherein

$\text{R}^1\text{-R}^3$ are independently hydrogen, an unsubstituted or substituted C_{1-12} straight chain alkyl, an
 10 unsubstituted or substituted C_{3-12} branched chain alkyl, an unsubstituted or substituted C_{3-12} straight chain olefinic, an unsubstituted or substituted C_{3-12} branched chain olefinic, a substituted or unsubstituted C_{3-8} cycloalkyl, a C_{3-8} heterocyclic ring bound through a
 15 carbon atom and in which the heteroatom is oxygen or nitrogen, a substituted or unsubstituted naphthyl, a substituted or unsubstituted tetrahydronaphthyl, a substituted or unsubstituted octahydronaphthyl, benzyl or substituted benzyl, substituted with up to three
 20 substituents, or phenyl or substituted phenyl, substituted with up to three substituents;

R^4 and R^5 are independently chosen from hydrogen, an unsubstituted or substituted C_{1-12} straight chain

alkyl, an unsubstituted or substituted C_{3-12} branched
 chain alkyl, an unsubstituted or substituted C_{3-12}
 straight chain olefinic, an unsubstituted or
 substituted C_{3-12} branched chain olefinic, a substituted
 5 or unsubstituted benzyl, an unsubstituted or
 substituted phenyl, a substituted or unsubstituted
 piperazino, a substituted or unsubstituted morpholino,
 amino, an unsubstituted or substituted alkylamino, an
 unsubstituted or substituted arylamino, an unsubstituted
 10 or substituted dialkylamino, an unsubstituted or
 substituted diarylamino, carboxyalkylamino,
 carboxydialkylamino, unsubstituted or substituted tolyl,
 xylyl, anisyl, mesityl, an unsubstituted or substituted
 acetyl, an unsubstituted or substituted acetoxy,
 15 carboxy, an unsubstituted or substituted carboxymethyl,
 an unsubstituted or substituted carboxyethyl, an
 unsubstituted or substituted alkylcarbonyl, thiol, an
 unsubstituted or substituted alkylthio, an unsubstituted
 or substituted alkoxy, carboxamido, an unsubstituted or
 20 substituted alkylcarboxamido, or an unsubstituted or
 substituted dialkylcarboxamido, an unsubstituted or
 substituted phenoxy, an unsubstituted or substituted
 benzyloxy, phenylcarbonyl, benzylcarbonyl, an
 unsubstituted or substituted nitrophenyl, trialkylsilyl
 25 or nitro; and

R^1 and R^2 together with the nitrogen atoms to which
 they are bonded form a substituted or unsubstituted C_{2-8}
 heterocyclic ring, or

R² and R³ together with the nitrogen atom to which they are bonded form a substituted or unsubstituted C₃₋₈ heterocyclic ring, or

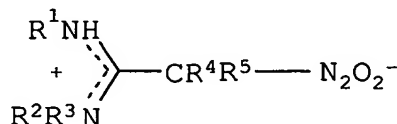
R¹ and R⁴ together with the nitrogen atom to which R¹ is bonded and with the carbon atom to which R⁴ is bonded and with the intervening carbon atom form a substituted or unsubstituted C₂₋₆ heterocyclic ring, or

R⁴ and R⁵ together with the carbon atom to which they are bonded form an unsubstituted or substituted C₃₋₈ cycloalkyl, or a C₄₋₈ heterocyclic ring in which the heteroatom is selected from the group consisting of oxygen, nitrogen, and sulfur, or

R⁴ and R⁵ together with the carbon atom to which they are bonded form an unsubstituted or substituted 1,4-benzodioxane, 1,3-benzodioxole, tetrahydronaphthlene, octahydronaphthalene, piperazine, morpholine, tetrahydroquinoline, tetrahydroquinoxaline, tetrahydroisoquinoline;

with the proviso that the heterocyclic ring formed by R¹ and R², R² and R³, R¹ and R⁴, or R⁴ and R⁵ is not a five-membered heterocyclic ring in which the heteroatom is oxygen, nitrogen, or sulfur, or six-membered heterocyclic ring in which the heteroatom is nitrogen.

3. The compound of claim 2 of



FORMULA I,

wherein

R^1 - R^3 are independently hydrogen, an unsubstituted or substituted C_{1-12} straight chain alkyl, an unsubstituted or substituted C_{3-12} branched chain alkyl, 5 an unsubstituted or substituted C_{3-12} straight chain olefinic, an unsubstituted or substituted C_{3-12} branched chain olefinic, a substituted or unsubstituted C_{3-8} cycloalkyl, a C_{3-8} heterocyclic ring bound through a carbon atom and in which the heteroatom is oxygen or 10 nitrogen, a substituted or unsubstituted naphthyl, a substituted or unsubstituted tetrahydronaphthyl, a substituted or unsubstituted octahydronaphthyl, benzyl or substituted benzyl, substituted with up to three substituents, or phenyl or substituted phenyl, 15 substituted with up to three substituents;

R^4 and R^5 are independently chosen from hydrogen, an unsubstituted or substituted C_{1-12} straight chain alkyl, an unsubstituted or substituted C_{3-12} branched chain alkyl, an unsubstituted or substituted C_{3-12} 20 straight chain olefinic, an unsubstituted or substituted C_{3-12} branched chain olefinic, a substituted or unsubstituted benzyl, an unsubstituted or substituted phenyl, a substituted or unsubstituted piperazino, a substituted or unsubstituted morpholino, 25 amino, an unsubstituted or substituted alkylamino, an unsubstituted or substituted arylamino, an unsubstituted or substituted dialkylamino, an unsubstituted or substituted diarylamino, carboxyalkylamino, carboxydialkylamino, unsubstituted or substituted tolyl,

xylyl, anisyl, mesityl, an unsubstituted or substituted acetyl, an unsubstituted or substituted acetoxy, carboxy, an unsubstituted or substituted carboxymethyl, an unsubstituted or substituted carboxyethyl, an
 5 unsubstituted or substituted alkylcarbonyl, thiol, an unsubstituted or substituted alkylthio, an unsubstituted or substituted alkoxy, carboxamido, an unsubstituted or substituted alkylcarboxamido, or an unsubstituted or substituted dialkylcarboxamido, an unsubstituted or
 10 substituted phenoxy, an unsubstituted or substituted benzyloxy, phenylcarbonyl, benzylcarbonyl, an unsubstituted or substituted nitrophenyl, trialkylsilyl or nitro; and

R^1 and R^2 together with the nitrogen atoms to which
 15 they are bonded form a substituted or unsubstituted C_{2-8} heterocyclic ring, or

R^2 and R^3 together with the nitrogen atom to which they are bonded form a substituted or unsubstituted C_{3-8} heterocyclic ring, a substituted or unsubstituted C_{3-8}
 20 heterocyclic ring, or

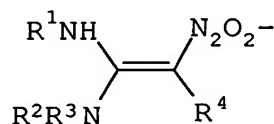
R^1 and R^4 together with the nitrogen atom to which R^1 is bonded and with the carbon atom to which R^4 is bonded and with the intervening carbon atom form a substituted or unsubstituted C_{2-6} heterocyclic ring, or

25 R^4 and R^5 together with the carbon atom to which they are bonded form an unsubstituted or substituted C_{3-8} cycloalkyl, or a C_{4-8} heterocyclic ring in which the heteroatom is selected from the group consisting of oxygen, nitrogen, and sulfur, or

R⁴ and R⁵ together with the carbon atom to which they are bonded form an unsubstituted or substituted 1,4-benzodioxane, 1,3-benzodioxole, tetrahydronaphthlene, octahydronaphthalene, piperazine, morpholine, tetrahydroquinoline, tetrahydroquinoxaline, tetrahydroisoquinoline;

with the proviso that the heterocyclic ring formed by R¹ and R², R² and R³, R¹ and R⁴, or R⁴ and R⁵ is not a five-membered heterocyclic ring in which the heteroatom is oxygen, nitrogen, or sulfur, or six-membered heterocyclic ring in which the heteroatom is nitrogen.

4. The compound of claim 2 of



FORMULA II,

15

wherein

R¹-R³ are independently hydrogen, an unsubstituted or substituted C₁₋₁₂ straight chain alkyl, an unsubstituted or substituted C₃₋₁₂ branched chain alkyl, an unsubstituted or substituted C₃₋₁₂ straight chain olefinic, an unsubstituted or substituted C₃₋₁₂ branched chain olefinic, a substituted or unsubstituted C₃₋₈ cycloalkyl, a substituted or unsubstituted C₃₋₈ heterocyclic ring bound through a carbon atom and in which the heteroatom is oxygen or nitrogen, a substituted or unsubstituted naphthyl, a substituted or unsubstituted tetrahydronaphthyl, a substituted or

25

unsubstituted octahydronaphthyl, benzyl or substituted benzyl, substituted with up to three substituents, or phenyl or substituted phenyl, substituted with up to three substituents;

- 5 R^4 is hydrogen, an unsubstituted or substituted C_{1-12} straight chain alkyl, an unsubstituted or substituted C_{3-12} branched chain alkyl, an unsubstituted or substituted C_{3-12} straight chain olefinic, an unsubstituted or substituted C_{3-12} branched chain
- 10 olefinic, a substituted or unsubstituted benzyl, an unsubstituted or substituted phenyl, a substituted or unsubstituted piperazino, a substituted or unsubstituted morpholino, amino, an unsubstituted or substituted alkylamino, an unsubstituted or substituted
- 15 arylamino, an unsubstituted or substituted dialkylamino, an unsubstituted or substituted diarylamino, carboxyalkylamino, carboxydialkylamino, unsubstituted or substituted tolyl, xylyl, anisyl, mesityl, an unsubstituted or substituted acetyl, an unsubstituted or
- 20 substituted acetoxy, carboxy, an unsubstituted or substituted carboxymethyl, an unsubstituted or substituted carboxyethyl, an unsubstituted or substituted alkylcarbonyl, thiol, an unsubstituted or substituted alkylthio, an unsubstituted or substituted
- 25 alkoxy, carboxamido, an unsubstituted or substituted alkylcarboxamido, or an unsubstituted or substituted dialkylcarboxamido, an unsubstituted or substituted phenoxy, an unsubstituted or substituted benzyloxy,

phenylcarbonyl, benzylcarbonyl, an unsubstituted or substituted nitrophenyl, trialkylsilyl or nitro; and

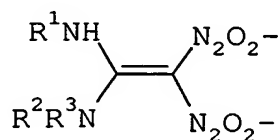
R^1 and R^2 together with the nitrogen atoms to which they are bonded form a substituted or unsubstituted C_{3-8} heterocyclic ring, or

R^2 and R^3 together with the nitrogen atom to which they are bonded form a substituted or unsubstituted C_{3-8} heterocyclic ring, or

R^1 and R^4 together with the nitrogen atom to which R^1 is bonded and with the carbon atom to which R^4 is bonded and with the intervening carbon atom form a substituted or unsubstituted C_{2-6} heterocyclic ring;

with the proviso that the heterocyclic ring formed by R^1 and R^2 , R^2 and R^3 , or R^1 and R^4 is not a five-membered heterocyclic ring in which the heteroatom is oxygen, nitrogen, or sulfur, or six-membered heterocyclic ring in which the heteroatom is nitrogen.

5. The compound of claim 2 of



FORMULA III,

wherein

R^1 - R^3 are independently hydrogen, an unsubstituted or substituted C_{1-12} straight chain alkyl, an unsubstituted or substituted C_{3-12} branched chain alkyl, an unsubstituted or substituted C_{3-12} straight chain

olefinic, an unsubstituted or substituted C_{3-12} branched chain olefinic, a substituted or unsubstituted C_{3-8} cycloalkyl, a C_{3-8} heterocyclic ring bound through a carbon atom and in which the heteroatom is oxygen or nitrogen, a substituted or unsubstituted naphthyl, a substituted or unsubstituted tetrahydronaphthyl, a substituted or unsubstituted octahydronaphthyl, benzyl or substituted benzyl, substituted with up to three substituents, or phenyl or substituted phenyl, substituted with up to three substituents; and

R^1 and R^2 together with the nitrogen atoms to which they are bonded form a substituted or unsubstituted C_{2-8} heterocyclic ring, or

R^2 and R^3 together with the nitrogen atom to which they are bonded form a substituted or unsubstituted C_{3-8} heterocyclic ring;

with the proviso that the heterocyclic ring formed by R^1 and R^2 , or R^2 and R^3 is not a five-membered heterocyclic ring in which the heteroatom is oxygen, nitrogen, or sulfur, or six-membered heterocyclic ring in which the heteroatom is nitrogen.

6. The compound of Formulae I, II or III of claim 2 wherein the substituents on the substituted groups are selected from the group consisting of alkoxy, acyloxy, hydroxy, halo, benzyl, acetyl, carboxyl, carboxyalkyl, carboxyalkylamido, carboxydialkylamido, alkylcarbonyl, arylamino, diarylamino, cyano, tolyl, xylyl, mesityl, anisyl, carboxamido, amino, alkylamino, dialkylamino,

formyl, dioxane, thiol, alkylthiol, aryl, heteroaryl, or phenoxy, benzyloxy, phenylcarbonyl, benzylcarbonyl, nitrophenyl, trialkylsilyl, nitro, sulfonyl, nitrobenzyl, trialkylammonium, alkyl, cycloalkyl,
5 tetrahydrofuranyl, tetrahydropyranyl, piperidine and morpholine.

7. The compound of claim 3, wherein the substituents on the substituted groups are selected from
10 the group consisting of alkoxy, acyloxy, hydroxy, halo, benzyl, acetyl, carboxyl, carboxyalkyl, carboxyalkylamido, carboxydialkylamido, alkylcarbonyl, arylamino, diarylamino, cyano, tolyl, xylyl, mesityl, anisyl, carboxamido, amino, alkylamino, dialkylamino,
15 formyl, dioxane, thiol, alkylthiol, aryl, heteroaryl, or phenoxy, benzyloxy, phenylcarbonyl, benzylcarbonyl, nitrophenyl, trialkylsilyl, nitro, sulfonyl, nitrobenzyl, trialkylammonium, alkyl, cycloalkyl, tetrahydrofuranyl, tetrahydropyranyl, piperidine and
20 morpholine.

8. The compound of claim 4, wherein the substituents on the substituted groups are selected from the group consisting of alkoxy, acyloxy, hydroxy, halo,
25 benzyl, acetyl, carboxyl, carboxyalkyl, carboxyalkylamido, carboxydialkylamido, alkylcarbonyl, arylamino, diarylamino, cyano, tolyl, xylyl, mesityl, anisyl, carboxamido, amino, alkylamino, dialkylamino, formyl, dioxane, thiol, alkylthiol, aryl, heteroaryl, or

phenoxy, benzyloxy, phenylcarbonyl, benzylcarbonyl,
nitrophenyl, trialkylsilyl, nitro, sulfonyl,
nitrobenzyl, trialkylammonium, alkyl, cycloalkyl,
tetrahydrofuranyl, tetrahydropyranyl, piperidine and
5 morpholine.

9. The compound of claim 5, wherein the
substituents on the substituted groups are selected from
the group consisting of alkoxy, acyloxy, hydroxy, halo,
10 benzyl, acetyl, carboxyl, carboxyalkyl,
carboxyalkylamido, carboxydialkylamido, alkylcarbonyl,
arylamino, diarylamino, cyano, tolyl, xylyl, mesityl,
anisyl, carboxamido, amino, alkylamino, dialkylamino,
formyl, dioxane, thiol, alkylthiol, aryl, heteroaryl, or
15 phenoxy, benzyloxy, phenylcarbonyl, benzylcarbonyl,
nitrophenyl, trialkylsilyl, nitro, sulfonyl,
nitrobenzyl, trialkylammonium, alkyl, cycloalkyl,
tetrahydrofuranyl, tetrahydropyranyl, piperidine and
morpholine.

20

10. The compound of claim 2 of Formulae I, II or
III, wherein the substituent on the substituted groups
is a heteroaryl selected from the group consisting of
pyrrole, furan, thiophene, thiazole, pyrazole, pyran,
25 pyridine, and pyrimidine.

11. The compound of claim 7, wherein the
substituent on the substituted groups is a heteroaryl
selected from the group consisting of pyrrole, furan,

thiophene, thiazole, pyrazole, pyran, pyridine, and pyrimidine.

12. The compound of claim 8, wherein the
5 substituent on the substituted groups is a heteroaryl selected from the group consisting of pyrrole, furan, thiophene, thiazole, pyrazole, pyran, pyridine, and pyrimidine.

10 13. The compound of claim 9, wherein the substituent on the substituted groups is a heteroaryl selected from the group consisting of pyrrole, furan, thiophene, thiazole, pyrazole, pyran, pyridine, and pyrimidine.

15 14. The compound of claim 2 of Formulae I, II or III, wherein the substituents on the substituted groups are selected from the group consisting of benzyl, tolyl, carboxyl, carboxyalkyl, dialkylamino, arylamino, and
20 diarylamino.

15 15. The compound of claim 3, wherein the substituents on the substituted groups are selected from the group consisting of benzyl, tolyl, carboxyl, carboxyalkyl, dialkylamino, arylamino, and diarylamino.

16. The compound of claim 4, wherein the substituents on the substituted groups are selected from

the group consisting of benzyl, tolyl, carboxyl, carboxyalkyl, dialkylamino, arylamino, and diarylamino.

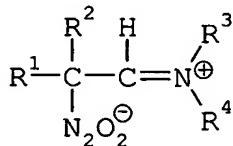
17. The compound of claim 5, wherein the substituents on the substituted groups are selected from the group consisting of benzyl, tolyl, carboxyl, carboxyalkyl, dialkylamino, arylamino, and diarylamino.

18. The compound of claim 5, wherein R^1 and R^2 are hydrogen and R^3 is the entire substituent attached to an amine of a compound selected from the group consisting of an amino acid, tryptamine, serotonin, histamine, valcyclovir, adenosine, thyroxine, guanine, guanosine, ubenimex, glucosamine, mannosamine, mycosamine, sphingosine, thienamycin, penicillamine and rimantadine.

19. The compound of claim 18, wherein the amino acid is selected from the group consisting of lysine, tryptophan and hydroxy-tryptophan.

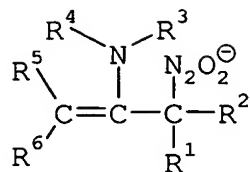
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20. A compound selected from the group consisting of



FORMULA IV and

25



FORMULA V

wherein R^1 , R^2 , R^5 and R^6 are independently hydrogen, an
 5 unsubstituted or substituted C_{1-12} straight chain alkyl,
 an unsubstituted or substituted C_{3-12} branched chain
 alkyl, an unsubstituted or substituted C_{3-12} straight
 chain olefinic, an unsubstituted or substituted C_{3-12}
 branched chain olefinic, a substituted or unsubstituted
 10 benzyl, a substituted or unsubstituted phenyl, a
 substituted or unsubstituted piperazino, a substituted
 or unsubstituted morpholino, amino, an unsubstituted or
 substituted alkylamino, an unsubstituted or substituted
 arylamino, an unsubstituted or substituted dialkylamino,
 15 an unsubstituted or substituted diarylamino,
 carboxyalkylamino, carboxydialkylamino, cyano, a
 substituted or unsubstituted tolyl, xylyl, anisyl,
 mesityl, an unsubstituted or substituted acetyl, an
 unsubstituted or substituted acetoxyl, carboxyl, an
 20 unsubstituted or substituted carboxymethyl, an
 unsubstituted or substituted carboxyethyl, an
 unsubstituted or substituted alkylcarbonyl, thiol, an
 unsubstituted or substituted alkylthio, an unsubstituted
 or substituted alkoxy, carboxamido, an unsubstituted or
 25 substituted alkylcarboxamido, or an unsubstituted or
 substituted dialkylcarboxamido, a substituted or

unsubstituted phenoxy, a substituted or unsubstituted benzyloxy, phenylcarbonyl, benzylcarbonyl, a substituted or unsubstituted nitrophenyl, trialkylsilyl or nitro,

R^1 and R^2 together with the carbon to which they are
5 bonded can form a substituted or unsubstituted C^4-C^8 cycloalkyl,

R^2 and R^3 together with the nitrogen atom to which they are bonded form a substituted or unsubstituted C_{3-8} cycloalkyl,

10 R^3 and R^4 are an unsubstituted or substituted C_{1-12} straight chain alkyl, an unsubstituted or substituted C_{3-12} branched chain alkyl, an unsubstituted or substituted C_{3-12} straight chain olefinic, an unsubstituted or substituted C_{3-12} branched chain
15 olefinic, a substituted or unsubstituted C_{3-8} cycloalkyl, a substituted or unsubstituted C_{3-8} heterocyclic ring bound through a carbon atom and in which the heteroatom is oxygen or nitrogen, a substituted or unsubstituted naphthyl, a substituted or
20 unsubstituted tetrahydronaphthyl, a substituted or unsubstituted octahydronaphthyl, benzyl or substituted benzyl, substituted with up to three substituents, or phenyl or substituted phenyl, substituted with up to three substituents, or

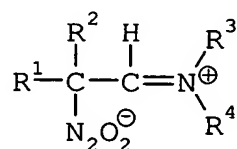
25 R^3 and R^4 together with the nitrogen atom to which they are bonded can form a C_{3-8} heterocyclic ring or a C_{3-8} substituted heterocyclic ring or a C_{3-8} unsubstituted or substituted heterocyclic ring

containing up to two additional heteroatoms selected from the group O, S, N, or

R¹ and R⁶ together with the C=C-C through which they are bonded form an unsubstituted or substituted
5 cycloalkyl, or

R⁵ and R⁶ together with the carbon to which they are bonded can form a substituted or unsubstituted C₄₋₈ cycloalkyl.

10 21. A compound of



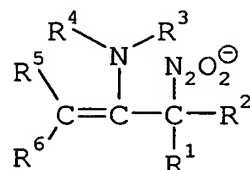
FORMULA IV

wherein R¹ and R² are independently hydrogen, an
15 unsubstituted or substituted C₁₋₁₂ straight chain alkyl, an unsubstituted or substituted C₃₋₁₂ branched chain alkyl, an unsubstituted or substituted C₃₋₁₂ straight chain olefinic, an unsubstituted or substituted C₃₋₁₂ branched chain olefinic, a substituted or unsubstituted
20 benzyl, a substituted or unsubstituted phenyl, a substituted or unsubstituted piperazino, a substituted or unsubstituted morpholino, amino, an unsubstituted or substituted alkylamino, an unsubstituted or substituted arylamino, an unsubstituted or substituted dialkylamino,
25 an unsubstituted or substituted diarylamino, carboxyalkylamino, carboxydialkylamino, cyano, a

substituted or unsubstituted tolyl, xylyl, anisyl, mesityl, an unsubstituted or substituted acetyl, an unsubstituted or substituted acetoxy, carboxy, an unsubstituted or substituted carboxymethyl, an
 5 unsubstituted or substituted carboxyethyl, an unsubstituted or substituted alkylcarbonyl, thiol, an unsubstituted or substituted alkylthio, an unsubstituted or substituted alkoxy, carboxamido, an unsubstituted or substituted alkylcarboxamido, or an unsubstituted or
 10 substituted dialkylcarboxamido, a substituted or unsubstituted phenoxy, a substituted or unsubstituted benzyloxy, phenylcarbonyl, benzylcarbonyl, a substituted or unsubstituted nitrophenyl, trialkylsilyl or nitro,

R^3 and R^4 are an unsubstituted or substituted C_{1-12}
 15 straight chain alkyl, an unsubstituted or substituted C_{3-12} branched chain alkyl, an unsubstituted or substituted C_{3-12} straight chain olefinic, an unsubstituted or substituted C_{3-12} branched chain olefinic, a substituted or unsubstituted C_{3-8}
 20 cycloalkyl, a substituted or unsubstituted C_{3-8} heterocyclic ring bound through a carbon atom and in which the heteroatom is oxygen or nitrogen, a substituted or unsubstituted naphthyl, a substituted or unsubstituted tetrahydronaphthyl, a substituted or
 25 unsubstituted octahydronaphthyl, benzyl or substituted benzyl, substituted with up to three substituents, or phenyl or substituted phenyl, substituted with up to three substituents.

22. A compound of



FORMULA V

- 5 wherein R⁵ and R⁶ are independently hydrogen, an unsubstituted or substituted C₁₋₁₂ straight chain alkyl, an unsubstituted or substituted C₃₋₁₂ branched chain alkyl, an unsubstituted or substituted C₃₋₁₂ straight chain olefinic, an unsubstituted or substituted C₃₋₁₂ branched chain olefinic, a substituted or unsubstituted benzyl, a substituted or unsubstituted phenyl, a substituted or unsubstituted piperazino, a substituted or unsubstituted morpholino, amino, an unsubstituted or substituted alkylamino, an unsubstituted or substituted arylamino, an unsubstituted or substituted dialkylamino, an unsubstituted or substituted diarylamino, carboxyalkylamino, carboxydialkylamino, cyano, a substituted or unsubstituted tolyl, xylyl, anisyl, mesityl, an unsubstituted or substituted acetyl, an unsubstituted or substituted acetoxy, carboxy, an unsubstituted or substituted carboxymethyl, an unsubstituted or substituted carboxyethyl, an unsubstituted or substituted alkylcarbonyl, thiol, an unsubstituted or substituted alkylthio, an unsubstituted or substituted alkoxy, carboxamido, an unsubstituted or substituted alkylcarboxamido, or an unsubstituted or

substituted dialkylcarboxamido, a substituted or unsubstituted phenoxy, a substituted or unsubstituted benzyloxy, phenylcarbonyl, benzylcarbonyl, a substituted or unsubstituted nitrophenyl, trialkylsilyl or nitro,

5 R^3 and R^4 are an unsubstituted or substituted C_{1-12} straight chain alkyl, an unsubstituted or substituted C_{3-12} branched chain alkyl, an unsubstituted or substituted C_{3-12} straight chain olefinic, an unsubstituted or substituted C_{3-12} branched chain
10 olefinic, a substituted or unsubstituted C_{3-8} cycloalkyl, a substituted or unsubstituted C_{3-8} heterocyclic ring bound through a carbon atom and in which the heteroatom is oxygen or nitrogen, a substituted or unsubstituted naphthyl, a substituted or
15 unsubstituted tetrahydronaphthyl, a substituted or unsubstituted octahydronaphthyl, benzyl or substituted benzyl, substituted with up to three substituents, or phenyl or substituted phenyl, substituted with up to three substituents.

20

23. The compound of claim 22, wherein R^2 and R^3 , together with the carbon and nitrogen atom to which they are bonded, form a C_{3-8} cycloalkyl.

25

24. The compound of claim 23, wherein the C_{3-8} cycloalkyl is substituted with a heteroatom.

25. The compound of claim 22, wherein R^5 and R^6 , together with the C=C-C through which they are bonded, form a C_{3-12} alicyclic hydrocarbon.

5 26. The compound of claim 21, wherein R^3 and R^4 , together with the nitrogen to which they are bonded, form a C_{3-8} cycloalkyl.

10 27. The compound of claim 26, wherein the C_{3-8} cycloalkyl is further substituted with an unsubstituted or substituted heteroatom or an aromatic ring, optionally substituted with a C_{1-6} alkyl or a C_{1-6} alkoxy, and R^1 and R^2 optionally together form a C_{3-8} cycloalkyl.

15

28. A method of treating an animal having a biological disorder treatable with nitric oxide, which method comprises administering to the animal a compound of claim 1 in an amount sufficient to treat the
20 biological disorder in the animal.

29. A method of preventing a biological disorder in a mammal susceptible to prevention with nitric oxide, which method comprises administering to the
25 mammal a compound of claim 1 in an amount sufficient to prevent the biological disorder in the mammal.